

Patent Application No. 10/643,253

IN THE CLAIMS:

Please amend claims 1, 8, 13, 17 and 23, and add new claims 24-27 as follows:

Claim 1. (currently amended) A method for predicting the failure of an electronic circuit in an electronic device, the method comprising:

5 receiving a measured value for current draw of the electronic circuit from at least one voltage supply;

receiving at least one measured value for an environmental condition, wherein the environmental condition includes an environment temperature;

10 determining if the measured current draw is outside a pass range for the measured environmental condition; and

alerting of a potential failure of the electronic circuit if the measured current draw is outside the pass range.

Claim 2. (original) The method of claim 1, further comprising monitoring at least one operating condition of the electronic circuit, and wherein determining if the measured current draw is outside a pass range further comprises determining if the measured
5 current draw is outside a pass range for the operating condition of the electronic circuit.

Claim 3. (original) The method of claim 2, wherein the operating condition includes a CPU utilization level.

Claim 4. (original) The method of claim 2, wherein the operating condition includes a clock frequency.

Claim 5. (original) The method of claim 1, further comprising recording the current draw and environmental condition of the electronic circuit in a circuit log.

Claim 6. (original) The method of claim 5, wherein if the electronic circuit fails, isolating the electronic circuit from among a plurality of potentially failed electronic circuits in the electronic device using the recorded current draw and environmental
5 condition of the electronic circuit.

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Claim 7. (original) The method of claim 1, further comprising monitoring the current draw of significant circuit functions.

Claim 8. (currently amended) A system for predicting the failure of an electronic circuit, the system comprising:

a current monitor configured to receive a measured value for a current draw to the electronic circuit from at least one voltage
5 source;

an environment monitor configured to receive a measured value for at least one environmental condition of the electronic circuit, wherein the at least one environmental condition includes an
environment temperature;

10 a circuit state monitor configured to determine at least one operating condition of the electronic circuit; and

a failure alert unit configured to provide an alert notification when the current draw to the electronic circuit is outside a pass range at the measured environmental condition and the
15 measured operating condition of the electronic circuit.

Claim 9. (original) The system of claim 8, wherein the at least one operating condition includes a CPU utilization level.

Claim 10. (original) The system of claim 8, wherein the at least one operating condition includes a clock frequency.

Claim 11. (original) The system of claim 8, further comprising a circuit log configured to record the current draw, environmental condition and operating condition in computer readable memory.

Claim 12. (original) The system of claim 8, wherein the current monitor is further configured to measure the current draw of significant circuit functions.

Claim 13. (currently amended) A method for manufacturing an electronic circuit, the method comprising:

assembling the electronic circuit;

measuring a current draw of the electronic circuit at different
5 environment conditions and operating conditions, wherein the
different environmental conditions include an environment
temperature; and

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recording the current draw in an operating matrix, the
operating matrix configured to be used during normal operation of the
10 electronic circuit to alert when the current draw to the electronic
circuit is outside a pass range at the measured environmental
condition.

Claim 14. (original) The method of claim 13, wherein recording
the current draw in an operation matrix further comprises recording
the current draw in nonvolatile memory.

Claim 15. (original) The method of claim 13, further comprising
placing the assembled electronic circuit in a controlled environment.

Claim 16. (original) The method of claim 13, further comprising
monitoring the current draw of significant circuit functions.

Claim 17. (currently amended) A computer program product embodied
in a tangible media comprising:

computer readable program codes coupled to the tangible media
for predicting the failure of an electronic circuit in an electronic
5 device, the computer readable program codes configured to cause the
program to:

measure a current draw of the electronic circuit from at least
one voltage supply;

measure at least one environmental condition at the electronic
10 circuit, wherein the at least one environmental condition includes an
environment temperature;

determine if the measured current draw is outside a pass range
for the measured environmental condition; and

alert of a potential failure of the electronic circuit if the
15 measured current draw is outside the pass range.

Claim 18. (original) The computer program product of claim 17,
further comprising computer readable program code configured to cause
the program to monitor at least one operating condition of the
electronic circuit, and wherein the computer readable program code to
5 determine if the measured current draw is outside a pass range
includes computer readable program code configured to cause the

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program to determine if the measured current draw is outside a pass range for the operating condition of the electronic circuit.

Claim 19. (original) The computer program product of claim 18, wherein the operating condition includes a CPU utilization level.

Claim 20. (original) The computer program product of claim 18, wherein the operating condition includes a clock frequency.

Claim 21. (original) The computer program product of claim 17, further comprising computer readable program code configured to cause the program to record the current draw and environmental condition of the electronic circuit in a circuit log.

Claim 22. (original) The computer program product of claim 17, further comprising computer readable program code configured to cause the program to monitor the current draw of significant circuit functions.

Claim 23. (currently amended) A system for predicting the failure of an electronic circuit in an electronic device, the method comprising:

5 means for receiving a measured value for current draw of the electronic circuit from at least one voltage supply;

means for receiving at least one measured value for an environmental condition, wherein the at least one environmental condition includes an environment temperature;

10 means for determining if the measured current draw is outside a pass range for the measured environmental condition; and

means for alerting of a potential failure of the electronic circuit if the measured current draw is outside the pass range.

Claim 24. (new) The method of claim 1, wherein the wherein the at least one environmental condition includes an environment humidity.

Claim 25. (new) The system of claim 8, wherein the at least one environmental condition includes an environment humidity.

Claim 26. (new) The method of claim 13, wherein the different environmental conditions include environment humidity.

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Claim 27. (new) The computer program product of claim 17, wherein the different environmental conditions include environment humidity.